

A.A. County Potential IMPs - Site 43

**UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 1 -- Catchment Information**

Subwatershed: Unnamed Tributary
 Location of Catchment Centroid on ADC Map: Year: 2000 Page: 17 Grid: J7
 State Plane Coordinates of Outfall Location: X: 1398378 Y: 482595
 Closest Road Intersection to Outfall: Defense Highway and Priest Bridge Road
 Outfall SDI ID or Outfall Description: unknown
 Objective: Demonstration / Impairment(s) (Sheet 1) _____
 Drainage Area (ac): 1.5 Impervious Area (ac): 1.25
 Percent Impervious: 83% Soil Recharge Factor (S): 0.38
 WQ_v (required): 0.08 Re_v (required): 0.03
 Predominant Land Use: commercial Mean Depth to Ground Water: unknown
 Sanitary System: Septic Municipal Sewer Water Supply: On Site Well Public Water

Storm Drainage System Within Catchment

Piped: 100% Open Channels: 0%
 Area Drained by System: 100%
 Location in Catchment: Headwaters Middle Lower All
 Open Channel Lining- Vegetation: 0% Riprap: 0% Concrete: 0% Other: 0%

Existing IMP(s) / BMP(s)

SDI ID: Unknown Type (number from Sheets 4 & 5): 13 Age: _____
 Closest Road Intersection to IMP / BMP: Priest Bridge Road and Espey Court
 Catchment Area Treated (ac) : _____ Percentage Catchment Treated: _____
 WQ_v Provided: YES NO Re_v Provided: YES NO C_p Provided: YES NO

SDI ID: _____ Type (number from Sheets 4 & 5): _____ Age: _____
 Closest Road Intersection to IMP / BMP: _____
 Catchment Area Treated (ac) : _____ Percentage Catchment Treated: _____
 WQ_v Provided: YES NO Re_v Provided: YES NO C_p Provided: YES NO

SDI ID: _____ Type (number from Sheets 4 & 5): _____ Age: _____
 Closest Road Intersection to IMP / BMP: _____
 Catchment Area Treated (ac) : _____ Percentage Catchment Treated: _____
 WQ_v Provided: YES NO Re_v Provided: YES NO C_p Provided: YES NO

**UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 1 -- Catchment Information (concluded)**

CATCHMENT SUMMARY			
WQ _v (provided):	<u>0.07</u>	Re _v (provided) :	<u>0.021</u>
Area Treated (ac):	<u>1.35</u>	Impervious Area Treated (ac):	<u>1.1</u>
Area Treated (%):	<u>90%</u>	Impervious Area Treated (%):	<u>88%</u>

Comments The storm water management treats about one half of the property, which includes the roof. The drainage area of the facility cannot be determined because the storm drainage system is not known.

**UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 2 -- Site Information**

Site Name: Priest Bridge Station Address: 2151 Defence Highway

Site Owner: Gardiner Realty Inc. 261-6250

State Plane Coordinates of Site Centroid: X: 1398269 Y: 482679 Date: 5/28/03

Personnel: PM Weather: sunny, 70F deg

Area (ac): 1 Impervious Area (ac): 0.9

Percent Impervious: 89% Soil Recharge Factor (S): 0.38

WQ_v (required): 0.07 Re_v (required): 0.03

Property Area (ac): 1 Property Area Included in Site: 100%

Amount of Catchment Occupied by Site: 100%

Storm Drainage System Within Site

Piped: 100% Open Channels: 0% Area Drained by System: 60%

Open Channel Lining - Vegetation: 0% Riprap: 0% Concrete: 0% Other: 0%

Existing IMP(s) / BMP(s) (Identified on Page 1, FORM 1, Catchment Information)

SDI ID: Unknown Condition: Excellent Good Average Fair Poor

SDI ID: _____ Condition: Excellent Good Average Fair Poor

SDI ID: _____ Condition: Excellent Good Average Fair Poor

Site Information

Type of Pavement: Bituminous Concrete Gravel Grid Pavers Other _____

Pavement Condition: Excellent Good Average Fair Poor

Underdrains can be easily directed to existing storm drains or daylighted: YES NO

Gutter/Exterior Downspouts Present: YES NO

Roof Connected Directly to Storm Drain: YES NO

Roof Drains onto Impervious Surface: YES NO

Obvious Existing Drainage Problems: Extensive Moderate Average Limited None

Steep Slopes Present: Extensive Moderate Average Limited None

Existing Landscaping: Extensive Moderate Average Limited None

Mature / Specimen Trees: Extensive Moderate Average Limited None

Area Available for Aboveground BMPs: Extensive Moderate Average Limited None

Existing Cover of Potential Aboveground BMP Locations: Grass Landscaped Gravel Other Pervious
 Pavement Other Impervious

**UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 2 -- Site Information (concluded)**

Commercial / Institutional

Islands Present: YES NO

Curb Present Around Island: YES NO

Ground Level of Island Relative to Pavement: Above Equal Below

Island Landscaping: Impervious Bare Earth Gravel Grass Mulch Herbaceous Plants Shrubs
 Trees (<2 in. DBH) Trees (2 - 6 in. DBH) Trees (>6 in. DBH)

Trees have sufficient spacing to allow IMPs YES NO

Parking area that can be directed to potential treatment area with little grading: 80%

SITE SUMMARY			
WQ _v (provided) :	<u>0.070</u>	Re _v (provided):	<u>0.021</u>
Area Treated (ac) :	<u>1.35</u>	Impervious Area Treated (ac):	<u>1.1</u>
Area Treated (%) :	<u>100%</u>	Impervious Area Treated (%):	<u>100%</u>

Photographs

No. <u>230</u>	Description: <u>looking east along north side of property</u>
No. <u>231</u>	Description: <u>looking south along west side of property</u>
No. <u>232</u>	Description: <u>looking north along west side of property</u>
No. <u>233</u>	Description: <u>looking east along south side of property</u>
No. <u>234</u>	Description: <u>looking west along south side of property</u>
No. <u>235</u>	Description: <u>looking north along east side of property</u>
No. <u>236</u>	Description: <u>looking west along north side of property</u>
No. <u>237</u>	Description: <u>looking south along east side of property</u>
No. <u>238</u>	Description: <u>looking east along Defence Highway</u>
No. <u>239</u>	Description: <u>looking south along Priest Bridge Drive</u>

Comments Due to limited parking, no parking can be given up for IMPs. Topography and utilities prevent much of grassed area on west side from being used.

**UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 2 -- Site Information**



230



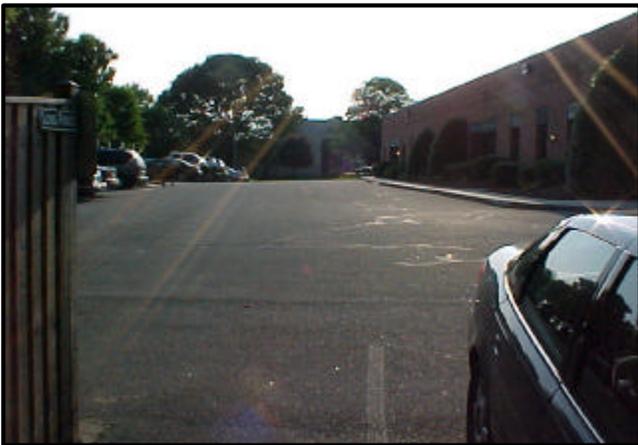
231



232



233



234



235

**UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 2 -- Site Information (concluded)**



236



237



238



239

UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS) FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP SWM BMP Retrofit New SWM BMP Type (Sheets 4 & 5): 7

State Plane Coordinates of IMP / BMP Centroid: X: 1398270 Y: 482671

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1): _____

Treatment Area Ownership: Transportation ROW Utility ROW County Other Government Private
 Other _____

Infrastructure / Structures / Buildings Impacted: YES NO

Limited Impact to Adjacent Properties: YES NO

Area Accessible for Construction: YES NO

Area Accessible for Maintenance: YES NO

Limited Permitting Issues: YES NO

Jurisdictional Wetlands Impacted: YES NO

Forest Retention Area Impacted: YES NO

Conservation Easement Impacted: YES NO

Utilities Present: None Natural Gas Electric Telephone Cable Water Sewer Other _____

Utilities Impacted: None Natural Gas Electric Telephone Cable Water Sewer Other _____

Impacted Utilities: Above Gound Underground

Critical Area Impacted: YES NO

Mature / Specimen Trees Impacted: YES NO

Existing Landscaping Impacted: YES NO

Underdrain Needed: YES NO

Underdrains Can Discharge: YES NO

Soils are Suitable: YES NO

Ground Water Table Level Suitable: YES NO

Estimate IMP / BMP drainage area included on site: 0.22 ac 100%

Retrofit of Existing SWM BMP

SDI ID: _____

Add Forebay: YES NO

Modify Outlet Structure: YES NO

Add Aquatic Bench: YES NO

Grade Bottom of Facility: YES NO

Plant Native Vegetation: YES NO

Provide Additional Storage Volume: YES NO

Excavation / Raise the Embankment: YES NO

**UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice**



240



244

UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS) FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP SWM BMP Retrofit New SWM BMP Type (Sheets 4 & 5): 41

State Plane Coordinates of IMP / BMP Centroid: X: 1398381 Y: 482595

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1): _____

Treatment Area Ownership: Transportation ROW Utility ROW County Other Government Private
 Other _____

Infrastructure / Structures / Buildings Impacted: YES NO

Limited Impact to Adjacent Properties: YES NO

Area Accessible for Construction: YES NO

Area Accessible for Maintenance: YES NO

Limited Permitting Issues: YES NO

Jurisdictional Wetlands Impacted: YES NO

Forest Retention Area Impacted: YES NO

Conservation Easement Impacted: YES NO

Utilities Present: None Natural Gas Electric Telephone Cable Water Sewer Other _____

Utilities Impacted: None Natural Gas Electric Telephone Cable Water Sewer Other _____

Impacted Utilities: Above Gound Underground

Critical Area Impacted: YES NO

Mature / Specimen Trees Impacted: YES NO

Existing Landscaping Impacted: YES NO

Underdrain Needed: YES NO

Underdrains Can Discharge: YES NO

Soils are Suitable: YES NO

Ground Water Table Level Suitable: YES NO

Estimate IMP / BMP drainage area included on site: 0.33 ac 70%

Retrofit of Existing SWM BMP

SDI ID: _____

Add Forebay: YES NO

Modify Outlet Structure: YES NO

Add Aquatic Bench: YES NO

Grade Bottom of Facility: YES NO

Plant Native Vegetation: YES NO

Provide Additional Storage Volume: YES NO

Excavation / Raise the Embankment: YES NO

**UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice (concluded)**

IMP / BMP SUMMARY			
WQ _v (provided):	<u>0.023</u>	Re _v (provided):	<u>0.000</u>
Area Treated (ac):	<u>0.33</u>	Impervious Area Treated (ac):	<u>0.29</u>

Photographs

No. <u>247</u>	Description: <u>looking east</u>
No. <u>248</u>	Description: <u>looking north</u>
No. <u>249</u>	Description: <u>looking south</u>
No. _____	Description: _____

Comments IMP/BMP Summary assumed 100% treatment of drainage area using Filterra (to be sized).

**UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice**



247



248



249

UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS) FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP SWM BMP Retrofit New SWM BMP Type (Sheets 4 & 5): 41

State Plane Coordinates of IMP / BMP Centroid: X: 1398389 Y: 482645

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1): _____

Treatment Area Ownership: Transportation ROW Utility ROW County Other Government Private
 Other _____

Infrastructure / Structures / Buildings Impacted: YES NO

Limited Impact to Adjacent Properties: YES NO

Area Accessible for Construction: YES NO

Area Accessible for Maintenance: YES NO

Limited Permitting Issues: YES NO

Jurisdictional Wetlands Impacted: YES NO

Forest Retention Area Impacted: YES NO

Conservation Easement Impacted: YES NO

Utilities Present: None Natural Gas Electric Telephone Cable Water Sewer Other _____

Utilities Impacted: None Natural Gas Electric Telephone Cable Water Sewer Other _____

Impacted Utilities: Above Gound Underground

Critical Area Impacted: YES NO

Mature / Specimen Trees Impacted: YES NO

Existing Landscaping Impacted: YES NO

Underdrain Needed: YES NO

Underdrains Can Discharge: YES NO

Soils are Suitable: YES NO

Ground Water Table Level Suitable: YES NO

Estimate IMP / BMP drainage area included on site: 0.41 ac 50%

Retrofit of Existing SWM BMP

SDI ID: _____

Add Forebay: YES NO

Modify Outlet Structure: YES NO

Add Aquatic Bench: YES NO

Grade Bottom of Facility: YES NO

Plant Native Vegetation: YES NO

Provide Additional Storage Volume: YES NO

Excavation / Raise the Embankment: YES NO

**UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice (concluded)**

IMP / BMP SUMMARY			
WQ _v (provided):	<u>0.026</u>	Re _v (provided):	<u>0.000</u>
Area Treated (ac):	<u>0.41</u>	Impervious Area Treated (ac):	<u>0.32</u>

Photographs

No. <u>250</u>	Description: <u>looking north</u>
No. <u>251</u>	Description: <u>looking west</u>
No. <u>252</u>	Description: <u>looking south</u>
No. _____	Description: _____

Comments IMP/BMP Summary assumed 100% treatment of drainage area using Filterra (to be sized).

**UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice**



250



251



252

UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS) FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP SWM BMP Retrofit New SWM BMP Type (Sheets 4 & 5): 38

State Plane Coordinates of IMP / BMP Centroid: X: 1398148 Y: 482685

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1): _____

Treatment Area Ownership: Transportation ROW Utility ROW County Other Government Private
 Other _____

Infrastructure / Structures / Buildings Impacted: YES NO

Limited Impact to Adjacent Properties: YES NO

Area Accessible for Construction: YES NO

Area Accessible for Maintenance: YES NO

Limited Permitting Issues: YES NO

Jurisdictional Wetlands Impacted: YES NO

Forest Retention Area Impacted: YES NO

Conservation Easement Impacted: YES NO

Utilities Present: None Natural Gas Electric Telephone Cable Water Sewer Other _____

Utilities Impacted: None Natural Gas Electric Telephone Cable Water Sewer Other _____

Impacted Utilities: Above Gound Underground

Critical Area Impacted: YES NO

Mature / Specimen Trees Impacted: YES NO

Existing Landscaping Impacted: YES NO

Underdrain Needed: YES NO

Underdrains Can Discharge: YES NO

Soils are Suitable: YES NO

Ground Water Table Level Suitable: YES NO

Estimate IMP / BMP drainage area included on site: 0.39 ac 100%

Retrofit of Existing SWM BMP

SDI ID: _____

Add Forebay: YES NO

Modify Outlet Structure: YES NO

Add Aquatic Bench: YES NO

Grade Bottom of Facility: YES NO

Plant Native Vegetation: YES NO

Provide Additional Storage Volume: YES NO

Excavation / Raise the Embankment: YES NO

**UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice (concluded)**

IMP / BMP SUMMARY			
WQ _v (provided):	<u>0.010</u>	Re _v (provided):	<u>0.010</u>
Area Treated (ac):	<u>0.25</u>	Impervious Area Treated (ac):	<u>0.13</u>

Photographs

No. <u>242</u>	Description: <u>looking south</u>
No. <u>243</u>	Description: <u>looking north</u>
No. _____	Description: _____

Comments Bioretention provides 65% treatment of drainage area as sized.
IMP size = 923 sq ft

**UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice**



242



243

UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS) FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP SWM BMP Retrofit New SWM BMP Type (Sheets 4 & 5): 60

State Plane Coordinates of IMP / BMP Centroid: X: varies Y: varies

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1): _____

Treatment Area Ownership: Transportation ROW Utility ROW County Other Government Private
 Other _____

Infrastructure / Structures / Buildings Impacted: YES NO

Limited Impact to Adjacent Properties: YES NO

Area Accessible for Construction: YES NO

Area Accessible for Maintenance: YES NO

Limited Permitting Issues: YES NO

Jurisdictional Wetlands Impacted: YES NO

Forest Retention Area Impacted: YES NO

Conservation Easement Impacted: YES NO

Utilities Present: None Natural Gas Electric Telephone Cable Water Sewer Other _____

Utilities Impacted: None Natural Gas Electric Telephone Cable Water Sewer Other _____

Impacted Utilities: Above Gound Underground

Critical Area Impacted: YES NO

Mature / Specimen Trees Impacted: YES NO

Existing Landscaping Impacted: YES NO

Underdrain Needed: YES NO

Underdrains Can Discharge: YES NO

Soils are Suitable: YES NO

Ground Water Table Level Suitable: YES NO

Estimate IMP / BMP drainage area included on site: 0.14 ac 100%

Retrofit of Existing SWM BMP

SDI ID: _____

Add Forebay: YES NO

Modify Outlet Structure: YES NO

Add Aquatic Bench: YES NO

Grade Bottom of Facility: YES NO

Plant Native Vegetation: YES NO

Provide Additional Storage Volume: YES NO

Excavation / Raise the Embankment: YES NO

**UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice (concluded)**

IMP / BMP SUMMARY			
WQ _v (provided):	<u>0.011</u>	Re _v (provided):	<u>0.011</u>
Area Treated (ac):	<u>0.14</u>	Impervious Area Treated (ac):	<u>0.14</u>

Photographs

No. <u>241</u>	Description: <u>looking east at "5c"</u>
No. <u>245</u>	Description: <u>looking north at "5b"</u>
No. <u>246</u>	Description: <u>looking east at "5a"</u>
No. _____	Description: _____

Comments IMP/BMP Summary shows combined results for 5a, 5b and 5c.

Locations of IMPs:

5a: X=1398217, Y=482586

5b: X=1398163, Y=482687

5c: X=1398251, Y=482751

IMP size = 6,175 sq ft

**UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice**



241



245



246